# Evaluation of the current status and knowledge contributions of Professional Doctorates

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## Abstract

The paper examines the status and knowledge contributions of Professional Doctorates undertaken by practicing professionals who in most cases are not intending to join the academic community. The purpose of these doctorates is usually to research and develop an original contribution to practice through practitioner-research. Giving greater primacy to practice knowledge has caused new developments in doctoral education.

The discussion is based upon a research project and an extensive literature review. Internationally, quality assurance agencies have generally embraced more work-related and practice oriented criteria in doctoral learning. Doctoral learning that seeks to enhance practice and develop benefit to communities and organisations in professional contexts leads to different pedagogic protocols for higher education, for example a differently ordered approach to ethical issues of research, assessment and peer review. More curriculum development and understanding of the wider knowledge contributions of doctorates is needed across higher education and professional communities.

**Keywords**

Professional Doctorates, professional knowledge, values, pedagogy, peer review

## Introduction

Most institutions that award professional doctorates (PDs) have introduced their PDs alongside regulations, systems and mindsets designed for PhDs. PDs are usually an independent and original contribution to professional practice; practitioner research is often a central activity. PhD students can develop and apply research in the same way, although this is not a key characteristic of the PhD as it is within the PD. This paper makes some observations about the knowledge contribution and some specific quality issues on PDs that may differ from those in most PhDs. The issues arise out of a research project that examined particular aspects of PDs and then considered the quality measures that might relate to these differences. The paper also reviews an extensive literature and draws upon secondary data from international perspectives on PDs including international regulatory issues in relation to research degrees.

The knowledge contribution of PDs are of concern because PDs are producing new kinds of doctoral level practitioners who engage with practice-oriented knowledge and seek to undertake doctorate level awards by creating valued purposes and products relating to

professional work. PDs that operate on the basis of practitioner-led research into practice have a different order of importance in relation to certain key areas that impinge on quality processes.

From 2006 to 2011 an on-going research project supported by three universities explored PDs in the UK and Australia. Analysis of the first two years of data was published (Costley & Stephenson, 2008). This earlier data has been used in this analysis and new data was added. The whole sample included comparisons between 147 PDs and 136 PhDs in the 2008 sample and also between the different PDs. Issues arising from the research are evaluated and discussed to consider the status and knowledge contributions and how PDs are developed and supported by quality assurance regulators, professional and academic communities.

The rationale for the research project was that PDs and some PhDs are becoming a means by which mid-to-late career learners can become accepted in professional communities as leading thinkers in their fields. Practitioners who undertake PDs make a personal and professional difference to a specific community (Bourner *et al.*, 2001) resulting in the major products of the PD research process, providing useful and innovative contributions to professional work.

The research, therefore, examined the implications for university learning if the purposes, processes and products of PDs are determined by the knowledge interests and alliances of those undertaking them and of other stakeholders, in relation to their professional communities. This is set in contrast to the university determining the knowledge content and purpose of doctorate learning and although there is considerable overlap between different doctoral programmes, differences were drawn in the research in order to gain clarity and be able to draw distinctions to enable pedagogical and scholarly understanding of the field.

The project aimed to identify how PDs (and some PhDs) are pursuing new purposes and products, what they produced and how they were being achieved. Using data from the research project and interviews with five key professionals in the field of doctorate learning from the perspective of the knowledge contribution and quality assurance issues, this paper has drawn together key issues for the development of thinking about quality assurance for PDs.

The methodology formed a survey to gain information that provided a mapping of data that was then used to create an interview schedule. There was a documentary analysis of selection processes and completed doctorates. A narrative enquiry was undertaken with the two main populations: interviews with coordinators, academic and industry supervisors and examiners; and interviews with graduates about their experiences of the doctoral programmes. An interpretive approach was used with in-depth interviews to a sample of each population. Focus groups were conducted with some students.

## An expanding literature, regulation and guidance

Lee *et al.* (2009) and Park (2007) provided a rationale for the continued growth of the PD. They demonstrated that key elements underpin PDs concerning the possibilities for professional creativity and purpose and that these are not driving factors in most PhDs. Usher (2002) and later Laing & Brabazon (2007) make evident that PDs better meet the needs of the 'knowledge economy' in this respect.

Writers addressing the broader area of changes in the way knowledge is produced and approached, reason that new kinds of knowledge production demonstrate the grounds upon which the growth of PDs are based. PDs are more accepting of what Nowotny *et al.*, (2003)

regarded as knowledge produced and used in a process of application such as in work and community environments and of Schön's (1987) constructionist notion of knowledge. Forming knowledge interests, alliances and régimes that define new kinds of knowledge outside the university, Bleiklie & Byrkjeflot (2002) argued, has led to an approach to knowledge that is generated and used in practice.

The production of knowledge from practice is often reflected in new nomenclature. Lycouris (2010) from an arts perspective noted the differing terminology that has arisen to refer to academic research involving elements of practice. The term 'practice-based' is only used when referring to written sources whereas practice-led refers to the complex relationship between artistic practice and academic research where the contribution to knowledge should be evident in the outcome or artwork. Furthermore 'practice as research', 'studio-based', 'arts-based', 'performance as research', 'research by design', 'research by creative practice', 'practice-related' and 'practice-focused' reflects both the differing approaches to the role of practice in doctoral education and the use of different terms in different subject areas.

In categorising the development of PDs, discipline-specific PDs such as the EdD and DBA have been identified by Maxwell (2003) as 'second-generation' and have moved away from some of the assumptions about academic research traditionally associated with the PhD. Maxwell (2003) demonstrated how PDs have developed to become more involved with professional knowledge. Bourner *et al.* (2001), in a survey of English universities identified twenty distinctive features of PDs and called for more research on these distinguishing features.

Another generation of PDs emerged out of the transdisciplinary, negotiated approach, as work-based and independent learning developed in several universities in the 1990s (Boud & Solomon, 2003). These are not aligned with any specific profession. The Doctor of Professional Studies is an example of what has been termed a practitioner doctorate (Lester, 2004), 'third-generation' (Stephenson *et al.,* 2006), or work-based doctorate (Boud & Tennant, 2006, Costley & Lester, 2011).

In the area of business and management a group of PDs consists of practitioner-oriented PhDs that use an action-learning or work-project approach (Usher, 2002; Zuber-Skerritt, 2006). In the visual and performing arts 'practice-based' PhDs and PDs are becoming common, where an artistic work is typically accompanied by a detailed narrative. These doctorates can test the boundaries of 'doctoral-ness', both in relation to the type of evidence that can be accepted and in the interpretation of practice as research (Burgess, 2007). The latter is a particular source of debate given that the practice-based doctorate's main reference point is still normally science and humanities' PhDs (Macleod & Holdridge, 2004; Elkins, 2004).

There is current debate about the internationalisation of doctoral education. International students bring a range of knowledge and academic values that do not necessarily legitimise western knowledge (Ryan, 2012) but brings new and diverse knowledge interests that exist within and between cultures. Such engagement with intellectual traditions around the world brings mutual respect and understanding between knowledge traditions.

The literature continues to raise questions regarding the positioning of PDs in relation to the more traditional PhDs; sometimes the difference is reflected in the name only. Boud & Tennant (2006) and Powell & Long (2005) showed how a convergence between some PhDs and PDs, indicates that distinctions based on title or programme structure are unreliable. Some PhD programmes have more features commonly ascribed to PDs and some PDs have more features commonly ascribed to PhDs. Boud & Tennant (2006) commented that the PhD

is enduringly robust and until other conceptions of 'doctoralness' become widely accepted, the PhD model will be the one with which PDs are compared. In the USA, for example, PDs are not always accepted as being on a par with the PhD, although in the UK and Australia the level and extent of 'challenge' posed by PDs is generally accepted as equivalent (NQAI, 2006, AQF, 2011).

The different ranking between PDs offered in North America can be distinguished. The USA has a comprehensive review of research doctorates (NRC, 2011) that provides detailed information about US research doctorates, such as programme rankings based on different performance indicators.

In making the point that PDs are not only a contribution to knowledge but a contribution to professional practice Taylor (2008) referred to what he described as a fascinating exchange of views (Cambridge University Senate, 2005, cited by Taylor, 2008) relating to whether or not the University of Cambridge should offer an Eng D. The exchange at one point stated that, 'It may be that the nation needs more such graduates, as it needs more plumbers' and that by offering 'vocational doctorates' such as the Eng D, universities might become 'glorified technical colleges'. Clearly in this university, PDs were viewed by some as awards with which universities perhaps should not be engaged and therefore would not compare with the academic standards of PhDs.

Lee *et al.* (2009, p. 211) found that an unquestioning acceptance of the PhD can be problematic and argued that:

> the simple re-assertion of the PhD as the default award represents a restoration of the logics and imperatives of disciplinarity and of older notions of so-called 'real' research. Further, questions of the changing economies of knowledge and practice within, between and beyond the reach of the university, are subordinated and disavowed.

Much of the debate about different doctoral models centres on the kinds of knowledge produced. There is no common epistemology representative of the conventional PhD. However, because PhDs have been established for some time and often represent an historically conventional award it could be argued that even as a broad and disparate group of awards, PhDs are more likely to produce what Gibbons *et al.* (1994), and re-addressed by Nowotny *et al.* (2001, 2003), called 'mode 1' discipline-based knowledge that becomes part of the research stock of the university. The acceptance of 'mode 2' knowledge as more usually generated by PDs, within a context of application and supplementing the knowledge production that used to be primarily produced, codified and held in scientific institutions, as of equivalent value in the university is far from established. 'Mode 2' knowledge being

> different from the process of application by which 'pure' science, generated in theoretical/experimental environments, is 'applied'; any technology is 'transferred'; and knowledge is subsequently 'managed'. The context of application, in contrast, describes the total environment in which scientific problems arise, methodologies are developed, outcomes are disseminated, and uses are defined. (Nowotny *et al*., 2003, p. 186)

Scott *et al.* (2004, p. 51) presented five alternative modes of knowledge of which one is the dispositional and transdisciplinary model that 'is essentially concerned with the individual and their own practice' and resists 'methodological imperialism' in that universities do not

insist on particular academic approaches that are usually bound up with subject-specific schools of thought. They argued that it is the way 'universities understand and in the process construct relationships between academic and professional knowledge' (Scott *et al.*, 2004, p. 42) that is important. Common elements appear to be emerging in PDs, for example there are a variety of approaches to knowledge production as articulated by Scott *et al.,* (2004), often across disciplinary and occupational boundaries. Closely allied to this is the focus on individual practitioners and their experience as the starting point. The nature of support also changes from a supervisory one to an advisory one (Boud & Tennant, 2006) as the doctoral candidate becomes regarded more as an 'autonomous self' (Tennant, 2004) rather than a part-time student. Approaches to knowledge production and the different kinds of students found on many doctorate programmes (mature professionals) has led to changes in pedagogy. Wellington & Sikes (2006) contended that the variety and diversity of PD candidates has important implications for the curriculum, the pedagogy and the assessment of PDs.

There is a literature on pedagogy in this area (Bourner *et al.* 2001, Maxwell, 2003, Stephenson *et al.* 2006) that is contained and specific. The above factors may be leading to a changing role for universities that requires them to engage more closely with communities outside academe. In particular the function of the PhD as licensing its graduates as researchers (Seddon, 2001) and consequently PhD students becoming peer with the researchers under which they receive supervision is not the same for most PD graduates. Boud & Lee (2005), in relation to the PhD, question what explicit pedagogy provides the opportunity for peer learning and they construct 'becoming peer' as meaning, becoming an academic. Clearly, for most PDs this is not the case and this issue alone has not been addressed fully in the literature.

Pedagogical understanding in PDs now includes more than knowledge of research although in most countries the research is the defining principle of doctorateness. Australia has led on the expansion of PDs and on the literature surrounding their development. The Australian Qualifications Framework has recently been revised (AQF, 2011). AQF delineated two forms of Doctoral Degree: the Doctoral Degree (Research) typically referred to as a PhD makes a significant and original contribution to knowledge and the Doctoral Degree (Professional) typically titled Doctor of (field of study) makes a significant and original contribution to knowledge in the context of professional practice. The AQF identified research as the defining characteristic of all Doctoral Degree qualifications. Each form of the degree has the same descriptor but the emphasis in the learning outcomes and research may differ.

In the UK, national doctoral regulations and guidance are designed to apply to the full range of doctoral programmes and qualifications so PhDs and PDs all meet broad conceptions of level. There is flexibility to accommodate differences between academic fields while encouraging consistent standards so multi- and transdisciplinary doctorates as well as a full range of specifically named subject-related awards are all included. The intention is to be relevant to a diverse range of doctoral candidates and with varied needs, from the young, good honours degree graduate undertaking a full-time PhD in preparation to become a researcher to the mature professional undertaking a part-time award in their area of work.

The UK Quality Assurance Agency's (QAA) Chapter B11 of the Quality Code (QAA, 2012), sets out principles and guidance for the management and delivery of all research degrees. QAA also published a Doctoral Degree Characteristics guide (QAA, 2011) which augments the indicators and expectations in Chapter B11. The guide summarises UK doctoral qualifications, highlighting similarities and differences and is intended as a practical reference text giving definitive information about UK doctoral programmes including their structures, content and titles, their purposes and assessment methods.

In 2001, updated in 2008, QAA Doctoral qualification descriptors incorporated issues that had not been taken up by many PhDs but that easily met with the specifications in many PDs. As well as including research-specific abilities, the doctoral qualification descriptor emphasised the relevance of postgraduate research training to employment and work which is at the heart of most PDs. For example, one point in the descriptor says that doctoral graduates:

> will be able to conceptualise, design and implement projects for the generation of significant new knowledge and/or understanding [and] will have the qualities needed for employment that require both the ability to make informed judgements on complex issues in specialist fields and an innovative approach to tackling and solving problems. (QAA 2008)

The expectation here is that postgraduate learning requires more than the conventional research expertise. It requires self-direction in learning and acting autonomously in a situation that is likely to involve complexity. At doctoral level the expectation is that judgement is likely to be 'informed' and there is 'innovation' in problem-solving. This indicates that the QAA guidance is influencing PhDs and concurring with PDs.

Lester (2004) has drawn attention to the importance of combining research activity with development activity and in relation to doctorate learning he points out that while the prevailing academic conception of doctorateness is rooted primarily in research, the chief concern of professional people undertaking work-based practitioner doctorates is more usually with creating development and change than with research as an end in itself.

Lester (2011) continued this reasoning and created a typology of workplace knowledge production from doctoral candidates' research projects. He demonstrated that practitioner knowledge does have relevance beyond the immediate context. He stated that:

> Complex change-oriented issues...approached with a researching and critically reflective orientation can be a powerful source, not only of contextual insights but of academically and professionally-valid knowledge, giving rise to new concepts, models, theories and critiques as a well as different ways of doing things…[and] is in most cases transdisciplinary…

The focus on work has seen more multi- and transdisciplinary approaches in doctorate education even within subject specific awards such as the Ed.D. Costley & Lester (2012) found that transdisciplinary work-based doctorates are not focused upon specific professions or disciplines and usually result in an original contribution to *practice* rather than as a research output or a piece of advanced scholarship. Innovative, high-level practice is demonstrated that impacts through drawing together and taking forward existing experience and expertise to create advanced professional development for the doctoral graduate which also has an impact on colleagues.

This has led to PDs, within their focus on professional knowledge developing a closer engagement with generic assessment criteria that values horizontal learning (Bernstein, 1999), soft skills (Eraut, 2004) and work-based knowledge. Furthermore, some PD programmes provide formal recognition of prior learning or allow existing work to be used as a basis for development of the individual programme and there has been a move to allow existing works to form the basis of the full doctorate (Chisholm & Davis, 2007), in a similar way to the PhD or DLitt by publication.

An important pedagogic strategy used in PDs is critical reflection. Sambrook & Stewart, (2008) found that there is a need to embed critical reflection from the start of the PD programme to enable participants to become more reflexive in their thinking. Talbot (2012) found that high-level reflective practice for PD practitioner- researchers enabled them to engage with significant doctoral research issues in the workplace. There were limitations in reflective learning that needed to be understood and Talbot described the challenges of overcoming them on a trans-disciplinary professional doctorate.

The approaches to knowledge and the range of pedagogies used in PDs results in ethical considerations that have a slightly different focus. Bleiklie & Byrkjeflot (2002) used the term 'utility oriented knowledge' to identify that the more conventional scientific approach involves truth and merit, whilst a socially responsible approach veers more towards issues of value and ethical principles.

Key factors affecting the reputation of each country's doctorates include having in place adequate and rigorous quality assurance mechanisms for doctoral programmes and the ability to demonstrate consistency of standards across varied programmes. In Europe several benchmarking papers are available for research degrees. However, offering PDs in most European countries is rare and the exception is the UK (EUA-CDE, 2010).

**Theory of practice**

The practice-led focus of PDs is underpinned by recent theoretical work by key thinkers who have contributed to the theory of practice and caused what Schatzki *et al.* (2001) has now made prominent and called 'the practice turn'. The growing interest in practice theory since the 1970s was established with Bourdieu's (1977) concept of the habitus that negotiates between objective structures and practices, transcending the dichotomies that had previously shaped theoretical thinking about the social world.

Feminist scholars have shown how women's different experiences to that of men bring about different practices for which there has been unequal treatment. This variety of experience has come about because of oppression around the intersections of class, race, age and gender. For example standpoint theory argues that individuals can be oppressed in some situations and in relation to some people because of their race, class gender and have found multiple systems of domination making it challenging to confront oppressive power structures (Harstock, 1997).

Power is an important issue for most theorists when discussing human actions that depend on shared skills or understandings. Foucault (1979) described power as a web of relations of force among individuals. He places particular emphasis on the violence through which modern régimes impress power on the body by replacing hierarchical and centralised forms of control with more diffuse and insidious forms of 'governmentality' and 'disciplinary power'. Disciplinary power works through the body and subjects learn to self-regulate their bodily practices, making it less necessary for states to intervene directly in lives.

Giddens (1984) theory of structuration found a connection between agency and structure, expressed in the term 'duality of structure' in that people make but are constrained by their environment. Social structure puts constraints on practice that exists through human agency causing both agent and structure to be involved in interpenetrating, interdependent and shifting practices.

For Schatzki (2001), 'the social is a field of embodied, materially interwoven practices centrally organized around shared practical understandings'. The maintenance of practices over time depends on shared embodied know-how as well as on their continued performance. Because activities (or actions) and bodies are 'constituted' within practices, 'the skilled body'

is where activity and mind as well as individual and society meet. It follows that we can only understand actions within their specific practical contexts.

**Applying knowledge in professional communities**

PD candidates engaged with their doctoral research in practice-based contexts that led to wider connections and networks, which themselves arose from a multiplicity of contexts and approaches. Some of these connections persisted and some were transitory; but within them there were frequently instances of co-operation and communication with individuals from groups other than those either in the research community or the researcher's professional community and hence resulting in a wide remit of expectations. The PDs appeared to differ in their contribution to knowledge; the central differences between them and the more conventional PhD candidates were to be found in relation to concepts of 'knowledge application'. It was indicated that PD research demanded the knowledge of professional contexts informed by a more wide-ranging knowledge of the area.

The knowledge production of the PDs tends to be driven by 'real world' and 'real time' imperatives. The focus on professional knowledge played a more central role in contrast to the more conventional conceptions of disciplinary knowledge associated with the PhD. Complexity is inbuilt in the PD field and for example, involves recognising the importance of knowing where and by whom practitioner problems can be addressed and the significance of their particular position and in their professional context and location of their work. The candidates had a specific positionality within their work context that enabled them to obtain insider knowledge about project requirements and to implement their research project with the declared aim of affecting change and creating new sources of influence within their organisation, professional area or community.

For PDs the positionality of the worker was important because the action involved in the research-and-development process, determines the agency of the practitioner-researcher. The adaptation of the term *bricoleur* by Lévi-Strauss (1972), to summon up a portrayal of an individual who undertakes 'bricolage', the science of the concrete, demonstrates some of the differences between the PDs and PhDs approaches to their doctoral work. The *bricoleur* is engaged in practice and for Lévi-Strauss (1972, p. 18) this involved a first 'practical step' a 'retrospective' detailed examination of 'similarities and differences' in signs mediating the use of material artefacts. For Lévi-Strauss (1972, p. 19) the difference between the engineer (depicted as the scientist) and the *bricoleur* 'remains a real one', with the former 'always trying to make his [sic] way out of, and go beyond, the constraints imposed by a particular state of civilisation, while the *bricoleur* by inclination or necessity always remains within them'.

The PDs in the research recognised the richness of their professional work as a source of expertise and learning. They were able to identify with situational purposes and knowledge requirements, rather than subject-discipline types of knowledge through gaining insider knowledge.

Understanding and knowledge as recognized by practice theorists, where knowledge is created and used rather than codified, is already realized by professional people at work in their CPD and other reflexive activities. In Levi-Strauss' terms, 'this is another way of saying that the engineer works by means of concepts and the *bricoleur* by means of *signs*' (Lévi-Strauss, pp. 18–19). The bricoleur may equivocate in many ways to the practice orientation of PDs and practice-led PhDs. In other words in the mythology, as originator of her/his own ideas the engineer (or scientist) works with concepts that are purported to be transparent to

the natural world, whereas the *bricoleur* always begins with 'what is at hand' that is always found embedded in cultures and mediated by the use of signs, which, themselves 'stand for something else'.

Knowledge in practice is constituted in the reflexive processes of the practitioner, the discursive and material processes of the particular context and the larger socio-political setting. Knowledge in practice does not always fit comfortably into particular disciplines but it is increasingly acknowledged as valuable in work settings and in the view of academics advising on the programmes.

Theories of practice have demonstrated the significance of context and the interplay between structures and actors. Academic judgement about such knowledge in practice should not be difficult to understand and develop yet in many areas there is much uncertainty about its validity or purposes.

The PDs were found to be more contextualised within an organisation or professional sphere than within a subject discipline. Mid-to-late career learners were undertaking PDs on topics about which they already had some expertise and familiarity. The products from their doctoral research and learning focused on practice-based knowledge and the function of theory was to underpin practice rather than leading the doctoral process. PDs were able to *link* the theory and scholarship of higher education with practitioners' professional knowledge arising from specific communities of practice to both generating and applying knowledge.

New epistemologies have emerged from the kind of work undertaken in PDs; for example, universities have explored trans-disciplinarity through designing innovative and successful programmes that include work-based research projects. There is an acknowledgment that the mature and experienced professionals undertaking PDs have inter-professional knowledge and their research proposals are concerned with practice-based issues and are not necessarily subject-discipline based.

Regarding knowledge and research an adviser stated that:

> It seems to me that most higher education models of research are based on a discipline model that is outdated and inappropriate for advanced practitioners. It is an old idea of knowledge generation that may have clear value in the sense of a traditional notion of the university but seems to me to fail the needs of the current knowledge economy where such distinctions perpetuate a system for its own sake. (respondent 1)

The subject discipline knowledge of the PD candidates may already be established, particularly those who may consider themselves as having technical expertise in their particular professional area. They were also likely to be familiar with the particular paradigm(s) associated with the fields and knew how to access disciplinary knowledge. There was usually an appointment of a second tutor as part of the supervisory team during the PD who was able to offer specific support regarding specialist fields of knowledge as well as having knowledge of the professional area.

**Values**

Feminist writers and writers concerned with anglo-centric views of doctoral education have alerted us to differences in practice and conceptions of knowledge. Furthermore, approaches to knowledge in professional practice contexts contain values that become implicit in the

process of learning through work. These diverse kinds of engagement create differing sets of values with differing priorities that contribute to knowledge production and application. The recognition of a range of standpoints enhances real diffusion and interactions within the professions and contributes to knowledge from which everyone can benefit. Academia needs to recognise these types of knowledge and to diversify the criteria by which knowledge generated in this way is legitimised.

The outcomes of PD research are often regarded as purposeful and useful to specific practice contexts and of concern to the more 'social', vocationally oriented knowledge that also incorporates utilitarian demands. The approach and attitude of academic authority in relation to these different, more professionally focused interests and values varied between and within the different cohorts of doctoral students.

All the PDs and some PhDs, formed connections through non-academic partnerships, personal and professional relationships and other factors that were based on practical, common or shared knowledge conceptions. This prioritised the purpose and consequences of their research. It occurred because there is always an immediate engagement with the views and needs of others within the work and professional contexts. These 'real' engagements were different from more conventional academic approach to knowledge that privilege truth and merit. The PDs were more likely to prioritise principles of ethics and values, suggesting that there was a different order of priorities. Thus, whilst knowledge production can be argued as being led by a relationship between meaning and truth, the knowledge application that was central to the PDs' research centred around more socially constituted values such as is found in issues relating to 'trust', (Costley *et al.,* 2010 pp 48-58) `care' and `gratitude' (Gibbs, 2009).

From one perspective, the value of more purposeful ends generated by PDs can be seen as an addition to the 'cultural' value of academic autonomy that aspires to seek truth for its own sake. Such pedagogies can thus facilitate new knowledge alliances with differing interests often connected to work contexts and can therefore have 'values' implications that may change the rank order of established values in academia.

**Pedagogical Issues**

As higher education engages more with the spheres of work practices and adopts broader epistemologies to take these into account, a more detailed assessment of the relationships between teaching and learning is required. For example, practice-based discourses use a variety of inscriptive practices such as accreditation of professional knowledge as well as academic knowledge and may use generic criteria to assess the quality of work-related outputs.

Issues arose concerning the most appropriate research designs and methods for practitioners on PD programmes researching in their own practice situations. The PD students, as practitioner-researchers, needed to use methodological approaches appropriate to and addressing their more strongly contextualised research. Their professional practices and activities require research knowledge that specialises in methodological approaches of development and systemic change, rather than those used in discipline-based knowledge. Academic advisers had to steer candidates into producing a project that involved high-level professional judgments and decision-making that influences change in complex real-life situations and that can refine or impact on the candidate's organisation or professional area.

Kincheloe & Berry (2004, p. 4) indicated that the methods that are best suited to answering questions about a phenomenon should be used. In looking at approaches to research they

found much methodology to be monological in nature and therefore leading to a reductionism that is often brought about by a narrow interpretation of disciplinary approaches to research methodology.

Much of the literature and textbooks on doctorate learning used by the PDs assumed that doctoral research was detached from the communities in which the candidates worked. The literature was written for those undertaking research to gain a doctoral qualification that will qualify them as a researcher or academic. Many texts assume that research will take place outside of the researcher's own community of practice. This is not always the case. An adviser pointed out that:

> I feel that there is a potential gap in the literature for a publication that explores, through worked examples how a variety of research methods are used in a work-based context, that are able to examine the complexity of knowledge of the workplace.
>
> (respondent 2)

Texts relating to supervision of doctoral students now need to move away from the 'learning at the foot of the master' model towards a more advisory mode, whereby both academic and professional colleagues who have expertise that can be developmental for the candidate can offer helpful and considered support. There is now some literature that relates more closely to the knowledge applications under discussion. A fitting mentoring and advising experience for senior professionals who research their own practice is required in the case of many doctorate programmes.

Personal and professional development in PD learning is usually undertaken through reflection on learning that is an important topic of ongoing research on professional reflection. Such key areas of high-level academic and professional knowledge and ability can be located in the level descriptors and assessment criteria that act as the benchmark against which assessors reach their decisions. An adviser's comment was that:

> In terms of using others' research, I have valued using a reflective cycle to aid students' development of reflective capabilities and reflective writing. (respondent 3)

The advisers gave PD students the opportunity to fully think through the practical implications of their research interventions that took place in their own work situations within a familiar context with work colleagues. The students were rooted in their particular context and primarily concerned with advanced professional practice for many years. They had acquired knowledge and understanding that the adviser did not have and the adviser drew alongside them rather than entering into an abstract engagement with the candidate's unique and specialised body of work-based knowledge. Supporting students also involved the development of research skills and research awareness. For many advisers this requires a pedagogical understanding that relates not only to the teaching of adults but also to the acknowledgement of candidates' advanced expertise and position. An adviser stated: 'the role of the insider researcher has identified issues in relation to advisers and how to support students through their research' (respondent 4). A facilitative ability for the adviser is often to formalise the high-level thinking of the PDs using knowledge of practitioner-led research and how it inextricably connects to development and change, the generation of new knowledge for practice and new practices.

Advisers working with students in various capacities, worked alongside them rather than acting as teacher or instructor. The approach was to support self-development which resulted in the advisers considering students' work more critically and with an added rigour towards their research and development activities. Advisers who are also formative assessors, were

expected to be well versed in academic requirements. They understood the level of criticality and advanced research and development practice that is required at doctorate level.

The implications for the academic advisers and course leaders in the study were wide-ranging. The study concerned doctorate learning but had implications for the way knowledge is interpreted in academic communities. The pedagogic implications of working with experienced professionals and considering a range of knowledge is of importance in regard to the way the academic community approaches course design and candidates' support.

## Becoming peer

Whereas the PhD holders typically entered the professional community of the people who have taught them to PhD level, PD holders usually remained within the professional community in which their new knowledge and understanding was situated and utilised throughout their period of study. For this reason, the concept of 'becoming peer' that Boud and Lee (2005) understood for a PhD holder's entry into academia, must be reconceptualised for holders of the PD. In this instance, becoming peer means becoming regarded as an acknowledged contributor to the development of a professional area that is not in itself primarily concerned with knowledge generation, in the same way as academia, but with knowledge application to the improved production and other, usually more concrete, goods and services. In these circumstances of radically altering knowledge régimes, university tutors need to reconceptualise not only knowledge creation, generation and use but also the concept of 'becoming peer'.

Assessment and judgement about doctoral research needs to be undertaken by peers who understand at a deep level how the doctoral research will impact upon the community that will benefit from that research. The peer group need to be in a position to judge whether the research is needed and whether it is appropriate and is undertaken using appropriate methods and approaches to the gathering of data and meeting the considerations of the practitioners. It is likely that the peers who are best placed to make these judgements have a close connection with the professional sphere in which the research is undertaken.

These factors lead to a changing pedagogical role for universities that require them to engage more closely with a range of communities. The situatedness of PD candidates in their work contexts is where their doctoral engagement enables them to 'become peer' in the sense of a senior professional attaining high academic endorsement. Becoming peer in professional communities outside academia raises issues about the purposes and consequences of knowledge application. PD candidates do not usually become peer with other academics and researchers; many of them wish to be acknowledged as experts in their fields by their peers in a range of professional areas. That peer review is the way in which standards are kept across the sector would imply that assessment should at least in part be undertaken in the professional sphere. One of the universities involved a professional as an examiner as well as an academic examiner at the *viva* stage; the other two only accepted academic examiners.

## Conclusion

Key issues for developing quality assurance for PDs are that a widening concept of knowledge is understood as emanating from, developed in and providing change for professional contexts. PDs provide a way of addressing knowledge that is to an extent outside disciplinary cultures and can offer alternative views and values that have resonance with practice, thereby engaging higher education more coherently with learning at work.

Whereas the PhD continues to be primarily a pathway into the academic profession of university teaching for people in the relatively early stages of their lives and careers, the PD functions primarily as a means of professional and personal development for mid to senior professionals. Although some of the PhDs in the sample were also mid-to-late career professionals and many of the categories are complex and overlap, the findings show that these two student populations differ widely. The differences were not only with respect to the background knowledge and understanding that they bring to their studies but also with respect to the role that they expected the degree to play in their careers.

There is still more curriculum development needed to support the practice-based research and development of PD candidates. There are significant implications relating to the way knowledge is created and used that in turn has implications for the development of doctoral pedagogy. A key quality issue is therefore the nature of course design and candidate support that provides flexible patterns of research and development. PD programmes need knowledge of constructing and evaluating doctorates in their specific context and physical location and how the experience and expertise of doctoral candidates together with an appropriately supported approach to research, critical engagement and critical reflection can better support PD candidates.

Regulatory and quality assurance régimes internationally are changing their criteria for doctorate degrees. Some changes relate more to the PhD than PD wherein an emphasis on employability and employer engagement is required in postgraduate training. Academics running PDs have generally welcomed the inclusion of the PDs positioning in quality assurance documentation as doctorateness in most countries is considered under one broad umbrella where there is equivalence of level. Uncertainties and inconsistencies appear to be more in the minds of those who are not informed about doctorate learning or who are unsure about the value of PDs.

Although regulatory and quality assurance guidance is being updated and developed, to reduce quality assurance to an emphasis on rules and procedures only would only serve to bureaucratise doctoral education. It is the professional relationship between the doctoral candidate and both academic and professional advisers in providing professional judgements and experience that will weigh heavily in achieving high quality outcomes. Considerations should be given to the nature of high-level professional practice and how higher education can support developments with its expertise in research, critical thinking and a whole range of pedagogical practices that can be of benefit to individuals and communities outside or on the periphery of higher education networks. For example approaches to postgraduate training and research activities can include the development of appropriate methodologies for practitioner-led research which addresses highly contextualised knowledge within situated practices. Recent work addressing philosophical issues raised by the category of practice are pushing the boundaries of where suitable research and development approaches to the work of PDs are being developed.

Having drawn out differences between some more conventional PhDs and some PDs it is clear that many doctorates including PhDs, for example the industrial PhD, are becoming more practice oriented and may find similarities in the PD sample. Most countries have taken the view that doctoral education has one set of regulations and that doctorates can have different characteristics.

PDs have evolved in response to a clear need in support of a variety of different professions. Universities, especially in Australia and the UK have been creative in their responses and have generated a number of innovative PD programmes. It can be expected that this form of

Doctorate will continue to grow in importance and requires a fresh look at the processes and resources that support them.

The research focussed on the status and knowledge contributions of PD researchers, the kinds of knowledge they deal with and how their doctoral learning is recognised in communities other than the academic. The PhD has been designed for academics to pursue a career in academia, whilst the PD and some PhDs are often designed for professions outside academia. The peers of PD students are usually in their professional context as most PD researcher is grounded in a practice situation and the researcher is usually a professional practitioner in this context. Practitioner-researchers and their colleagues are in a different professional sphere to academic researchers. Gaining a doctorate involves the status and positionality of the candidates and their ability to apply their doctoral work and be well regarded in their fields. Most doctorate candidates therefore do not intend to continue their professional life with a strong link to academics communities. Their networks may overlap with research communities but they seek critical engagement primarily with critical communities in their professional area, acknowledgement and recognition in their professional area. Their networks may overlap with research communities but they usually find acknowledgement and recognition in their own in their professional area. This embeddedness in a professional context leads to different pedagogic protocols for higher education, for example a differently ordered approach to ethical issues of research, assessment and peer review.

These factors have an implication for the status and knowledge contributions of professional and practice-led doctorates. The focus outside of the academic community provides new and informed analysis about what is held as important, useful and high-level doctoral learning. PD learning demands the knowledge of professional contexts informed by a more wide-ranging knowledge of the area. Research undertaken as part of a PD has become a way to enhance practice and to develop benefit to particular professional groups and organisations. Economic, social and political benefits may be particular to a discreet group but are couched within an awareness of the wider sphere in which the knowledge is produced that embraces both the scientific and the socially responsible elements of these doctoral practices and considers learning that cuts across and goes beyond disciplinary boundaries incorporating soft skills and work-based knowledge. What is needed are more differentiated approaches, flexible systems and awareness that acknowledges a range of knowledge contributions.

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